PASSY MUIR VALVE (PMV) USE IN SPONTANEOUSLY BREATHING PATIENTS

Staff this document applies to:

Medical Staff, Nurses, Speech Pathologists, Physiotherapists on all campuses, including ICU and in the community.

State any related Austin Health policies, procedures or guidelines:

Passy-Muir Valve (PMV) Use In Line with the Ventilator

Tracheostomy Cuff Deflation and Reinflation

Tracheostomy Clinical Procedure – Decannulation

Clinical Instruction Sheet - Use of Portex Suctionaid Tracheostomy Tube

Tracheostomy Learning Package – Use of the Passy-Muir Valve

Stridor in Adults

Definition:

The PMV is a one-way valve that opens upon inspiration and closes completely upon expiration. It fits the 15mm hub of any standard tracheostomy tube. A valve is always used with the cuff fully deflated.

Rationale:

- A one-way valve restores airflow through the upper airway which facilitates voicing, coughing, swallowing, return of sensation, and smell.
- Using a one-way is an important step in the decannulation process.

Clinical Alert:

The cuff must always be deflated when a Passy Muir Valve (PMV) is used. Failure to deflate the cuff can result in immediate respiratory compromise/distress and death.

- The PMV should be removed when:
  - The patient is sleeping.
  - The patient exhibits respiratory distress +/- stridor including increased work of breathing.
- Do not place the valve under the following circumstances:
  - Increased or copious secretions.
  - Sub-optimal humidification.
  - Upper airway obstruction.
  - Difficulty passing a suction catheter.
  - Severe coughing.
  - Unstable cardiorespiratory status.

- With a Bivona Fome-Cuf tracheostomy tube.

- If a patient arrives with a speaking valve from another manufacturer, remove the valve and contact the unit Speech Pathologist to assess the patient with a PMV.
- Only staff trained in placement of PMV may use PMV. This includes e-learning package.

Who is authorised to perform this procedure?:

- Following consultation with the treating Medical staff, the Speech Pathologist will conduct assessment for initial PMV placement with assistance from Physiotherapist and/or Specialist Nurse.
- If outside business hours, senior medical staff in ICU with training in valve placement can place the PMV for patient assessment. During business hours the Speech Pathologist will conduct formal assessment and establish the schedule for routine use if indicated.

Expected Outcome:

- The patient will safely and comfortably wear the PMV.
- The patient will be able to voice, cough, clear secretions and swallow saliva with increased ease.
- The patient will routinely use the PMV according to the schedule established by the Speech Pathologist.

Equipment:

- 10 ml syringe
- Clean gloves
- PMV (# 007 Aqua is the valve model most frequently used at Austin Health)
- Pulse oximetry during initial sessions or if patient status changes
- Goggles or protective eyewear
- Suctioning equipment

Procedure:

- Explain procedure to patient.
- Note baseline measures: HR, breathing patterns, RR and SpO2 if using oximeter.
- If a Suctionaid tracheostomy tube is in situ, suction above the cuff and suction the mouth if required.
- Suction via trachea if required.
- Fully deflate cuff and suction trachea simultaneously
- Check pilot balloon to ensure cuff is completely deflated.
- Secure the tracheostomy and place PMV on the tracheostomy with quarter clockwise turn.
- If patient's voice sounds wet there may be secretions in the upper airway. Encourage the patient to bring those to the mouth.
- Clear mouth with yankauer sucker as necessary.
- If patient cannot voice or demonstrates changes to heart rate, breathing patterns, respiratory patterns or SpO_2, do not use the one-way valve. Contact the Speech Pathologist.

Post Procedure:

- Ensure patient is comfortable and able to voice as expected.
- Monitor patient closely for intolerance of the valve including increased work of breathing, anxiety, increased coughing.
- Remove the valve as per documented schedule or at any time if the patient does not tolerate the valve.
- Document duration and tolerance with PMV use in the medical record.

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Legislation/References/Supporting Documents:

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